Change Sheet for the Ballona Creek Estuary Toxic Pollutants TMDL Basin Plan Amendment

Page	Action	Added or Deleted Text	Reason for Change.
	Correct	Correct minor typographical errors throughout the Basin Plan Amendment.	For clarification.
3	Add and delete	The loading capacity for Ballona Creek Estuary is calculated by multiplying the numeric targets by the average annual deposition ~~amount~~ of fine sediment, defined as silts (grain size 0.0625 millimeters) and smaller, ~~deposited annually~~ within the Estuary by the bulk density of the sediment. The average annual ~~estimated~~ fine sediment deposited is 5,004 cubic meters per year (m^3/yr) and the bulk density is 1.42 metric tons per cubic meter (mt/m^3).	Clarifies that the loading capacity was calculated based on the average annual deposition of fine sediment and defines "fine sediment" as having a grain size of 0.0625 millimeters and smaller in response to comments.
5	Add and delete	Concentration-based ~~weather~~ waste load allocations are assigned to the minor NPDES permits and general non-storm water NPDES permits ~~(other than storm water permits)~~ that discharge to Ballona Creek or its tributaries.	Delete "weather", a typographic error, and add clarifying language with regards to the NPDES permits that will receive concentration-based waste load allocations.
6	Replace	The concentration-based load allocations for the minor NPDES permits and general non-storm water NPDES permits will be implemented through NPDES permit conditions ~~limits~~.	Replace "limits" with "conditions". This is in response to comments and in order to clarify the intent that WLAs will be implemented as BMPs.
6	Add	Within five years of the effective date of the TMDL, the construction industry will submit the results of	This addition was made in response to comments about

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		BMP effectiveness studies to determine BMPs that will achieve compliance with the waste load allocations assigned to construction storm water permittees. Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within six years of the effective date of the TMDL. General construction storm water permittees will be considered in compliance with waste load allocations if they implement these Regional Board approved BMPs.	the short timeframe and high turn over of construction projects. The added language recognizes that industry-wide compliance efforts are better than a site-specific BMP and monitoring program to address these short-term projects.
6	Add and delete	Add the word "industrial" before storm water permit and deleted ~~construction~~.	Clarifies that the model monitoring and reporting program to evaluate BMP effectiveness will apply only to industrial storm water permits because staff drafted separate requirements for the construction industry (see previous change).
6 & 7	Add	All general construction and industrial permittees must implement the approved BMPs within seven years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within six years of the effective date of the TMDL, each general construction and industrial storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with waste	New language provides a backstop in the event that the construction industry and other industries fail to demonstrate effective BMPs or the Regional Board fails to approve BMPs.

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		load allocations.	
7	Add and delete	Studies by the Army Corps of Engineers have shown that sediment delivery ~~in~~to Ballona Creek is related to the size of the storm (USACE, 2003).	Clarification.
8	Add and correct typo-graphical error	In addition, fish and mussel tissue data ~~and~~ is required in Ballona Creek Estuary to confirm the fish tissue listings.	Mussel tissue data was added in response to comments.
8	Add	Water quality samples shall be collected from Ballona Creek and Estuary monthly and analyzed for cadmium, copper, lead, silver, zinc, chlordane, dieldrin, DDT, total PCBs and total PAHs at detection limits that are at or below the minimum levels until the TMDL is reconsidered in the sixth year.	Clarification and to add additional listed pollutants to the list of analytes.
8	Add and delete	The MS4 and Caltrans storm water permittees are jointly responsible for conducting bioaccumulation testing of ~~the~~ fish and mussel tissue within the Estuary ~~monitoring~~. The permittees are required to submit for approval of the Executive Officer a monitoring plan that will provide the data needed to confirm the 303(d) listing or delisting, as applicable.	Added bioaccumulation testing of mussel tissue in response to comments.
8	Add	Add “testing” after “toxicity”.	Clarification.
8	Replace	Replace “~~yearly~~” with “semi-annually”	The sediment monitoring requirement was changed from yearly to semi-annually in response to comments.

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9	Add	The sediment toxicity testing shall include testing of multiple species, a minimum of three, for lethal and non-lethal endpoints. Toxicity testing may include: the 28-day and 10-day amphipod mortality test; the sea urchin fertilization testing of sediment pore water; and the bivalve embryo testing of the sediment/water interface. The chronic 28-day and shorter-term 10-day amphipod tests may be conducted in the initial year of quarterly testing and the results compared. If there is no significant difference in the tests, then the less expensive 10-day test can be used throughout the rest of the monitoring, with some periodic 28-day testing.	Added in response to comments.
9	Add	The water quality samples collected during wet weather as part of the MS4 storm water monitoring program shall ~~also~~ be analyzed for total dissolved solids, settable solids and total suspended solids if not already part of the existing sampling program. Sampling shall be designed to collect sufficient volumes of settable and suspended solids to allow for analysis of cadmium, copper, lead, silver, zinc, chlordane, dieldrin, total DDT, total PCBs, total PAHs, and total organic carbon in the bulk sediment.	To make clear the requirement to collect and analyze both settable and suspended solids.
9	Add and delete	Semi-annually, representative sediment sampling locations shall be randomly selected within the Estuary and analyzed for cadmium, copper, lead, silver, zinc, chlordane, dieldrin, DDT, total PCBs, and total PAHs at detection limits that are lower than	Changes made in response to comments and will provide more complete data to assess the effects of toxic pollutants in sediments.

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		the ERLs. ~~In addition,~~The sediment samples shall also be analyzed for total organic carbon, grain size and sediment toxicity. The sediment toxicity testing shall include testing of multiple species, a minimum of three, for lethal and non-lethal endpoints. Toxicity testing may include: the 28-day and 10-day amphipod mortality test; the sea urchin fertilization testing of sediment pore water; and the bivalve embryo testing of the sediment/water interface. ~~Amphipod survival bioassays shall be conducted on each sediment sample.~~	
9	Add and delete	Accelerated monitoring shall be conducted to confirm toxicity at stations identified as toxic. Accelerated monitoring shall consist of six additional tests, approximately every two weeks, over a 12-week period. If the results of any two of the six accelerated tests are less than 90% survival, then the MS4 and Caltrans permittees shall conduct a Toxicity Identification Evaluation (TIE). The TIE shall include reasonable steps to identify the sources of toxicity and steps to reduce the toxicity. ~~A Phase I TIE interstitial water, using the amphipod test species, shall be conducted for samples from stations identified to be toxic in a single amphipod survival bioassay.~~	Changes made in response to comments and will serve to avoid unnecessary TIE testing.
9 & 10	Add	The Phase I TIE shall include the following treatments and corresponding blanks: baseline toxicity; particle removal by centrifugation; solid	Change made in response to comments; provides flexibility in testing protocol.

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		phase extraction of the centrifuged sample using C8, C18, or another media; complexation of metals using ethylenediaminetetraacetic acid (EDTA) addition to the raw sample; neutralization of oxidants/metals using sodium thiosulfate addition to the raw sample; and inhibition of organo-phosphate (OP) pesticide activation using piperonyl butoxide addition to the raw sample (crustacean toxicity tests only).	
10	Add	Bioaccumulation monitoring of fish and mussel tissue within the Estuary shall be conducted. The permittees are required to submit for approval of the Executive Officer a monitoring plan that will provide the data needed to assess the effectiveness of the TMDL.	Change made in response to comments; the addition of bioaccumulation testing will provide more complete data for assessing toxic effects.
10	Add	Developing and implementing a monitoring program to collection the data necessary to apply a multiple lines of evidence approach.	Change made in response to comments.
11	Replace	12~~9~~ months after the effective date of the TMDL	The time allowed for the MS4 and Caltrans permittees to submit a coordinate monitoring plan was extended from 9 to 12 months in response to comments.
11	Replace	18~~2~~ months after effective date of TMDL (Draft Report) 24~~18~~ months after effective date of TMDL (Final Report)	The time allowed for the MS4 and Caltrans permittees to submit a draft implementation plan was extended from 12 months to 18 months; the time

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			allowed for submittal of a final implementation plan was extended from 18 months to 24 months. These extensions were made in response to comments. The extension will not extend the schedule for meeting the WLAs.